

IN THE CLAIMS:

1. (Currently Amended) An insulation material that includes at least one of (a) particles of a combustible insulation material that are coated with a fire resistant material and bonded together with a binder material and/or (b) an open celled foam of the combustible insulation material having internal surfaces coated with the fire resistant material.

2. (Original) The insulation material defined in claim 1 wherein the fire resistant material is an intumescent material.

3. (Currently Amended) The insulation material defined in claim 1 ~~or claim 2~~ wherein the binder material at least substantially fills interstices between coated particles.

4. (Original) The insulation material defined in claim 3 wherein the binder material is the coating material.

5. (Currently Amended) The insulation material defined in claim 1 ~~any one of the preceding claims~~ wherein the particles are at least substantially encapsulated by the fire resistant material.

6. (Currently Amended) The insulation material defined in claim 1 ~~any one of the preceding claims~~ wherein the particles include a fire retardant material.

7. (Currently Amended) The insulation material defined in claim 1 ~~any one of the preceding claims~~ wherein at least one of the coating material for the particles and/or the binder material that binds the particles together have at least one of water-proofing and/or vapor-proofing properties.

8. (Currently Amended) The insulation material defined in claim 1 ~~any one of the preceding claims~~ wherein at least one of the coating material and/or the binder material include fibre reinforcement that improves the mechanical properties of the insulation material.

9. (Currently Amended) The insulation material defined in claim 1 ~~any one of the preceding claims~~ wherein the combustible insulation material includes recycled insulation material.

10. (Original) A method of manufacturing an insulation material that includes coating particles of combustible insulation material with a fire resistant material.

11. (Currently Amended) The method defined in claim 10 further comprising ~~includes~~ coating particles of combustible insulation material with a liquid form of the fire resistant material.

12. (Currently Amended) The method defined in claim 11 further comprising ~~includes~~ transferring the particles with the ~~wet-coating~~ liquid form of fire resistant material into a mould, filling the interstices with further liquid fire resistant material, and removing the insulation material from the mould after the liquid fire resistant material has dried or set to a sufficient extent.

13. (Currently Amended) The method defined in claim 11 further comprising ~~includes~~ transferring coated particles into a mould after the liquid form of the fire resistant material has dried into a solid form, filling the interstices between the particles in the mould with a liquid binder material, and removing the insulation material from the mound after the liquid binder material has dried or set to a sufficient extent.

14. (Currently Amended) The method defined in claim 11 further comprising ~~includes~~ transferring coated particles into a mould after the liquid form of the fire resistant material has dried into a solid form, filling the interstices between the particles in the mould with a polyurethane or polyisocyanurate foamable mixture, and removing the insulation from the mould after the foamable mixture has reacted and formed a foam product.

15. (Currently Amended) The method defined in claim 10 comprising ~~includes~~ forming free-flowing loose-fill agglomerates of the coated particles.

16. (Currently Amended) The method defined in claim 10 comprising ~~includes~~ forming free flowing loose-fill agglomerates of the coated particles and with a binder material that sets to hold the particles together.

17. (Currently Amended) The method defined in claim 10 comprising ~~includes~~ forming panels or other shaped products from the coated particles.

18. (Currently Amended) The method defined in claim 17 comprising ~~includes~~ forming panels or other shaped products by mixing the coated particles with a binder material.

19. (Original) The method defined in claim 18 wherein the binder material at least substantially fills interstices between coated particles in the products.

20. (Currently Amended) The method defined in ~~any one of claims~~ claim 17 to 19 ~~includes~~ further comprising forming panels or other shaped products having a uniform distribution of coated particles, whereby the insulation material can resist a fire coming from any direction.

21. (Currently Amended) The method defined in ~~any one of claims 17 to claim 20~~ ~~includes~~ further comprising applying metal facings or non-metal facings to the panels or other shaped products.

22. (Currently Amended) The method defined in ~~any one of claims~~ claim 10 to 20 ~~includes~~ further comprising manufacturing the insulation material from particles having a range of different particle sizes.

23. (Currently Amended) The method defined in ~~any one of claims~~ claim 10 to 22 ~~includes~~ further comprising manufacturing the insulation material by coating the particles with a range of different coating thicknesses.

24. (Currently Amended) The method defined in ~~any one of claims~~ claim 10 to 23 ~~includes~~ further comprising manufacturing the insulation material with layers at least one of different sized particles and/or different coating thicknesses

so that the insulation and fire resistance properties of the insulation material varies through its cross section.

25. (Currently Amended) The method defined in claim 24 ~~includes~~ further comprising manufacturing the insulation material with smaller particles and a thicker fire resistant coating located near the surfaces of the material and larger particles and a thinner coating located in the interior.

26. (Currently Amended) The method defined in claim 24 ~~or claim 25 includes~~ further comprising forming the layers with a binder material to hold the particles together within a layer and to hold the layers together.

27. (Currently Amended) The method defined in claim 26 further comprising ~~includes~~ incorporating microspheres of glass or ceramic material in at least one of (a) ~~into~~ the adhesive layer binding the facings to the insulation particles to improve the fire resistance at that boundary and/or (b) ~~in~~ the binder material as a filler to reduce the interstices between particles and thereby improve the insulation and the fire resistance.

28. (Original) The method defined in claim 27 wherein the microspheres are hollow.

29. (Currently Amended) The method defined in ~~any one of claims~~ claim 10 to 28 ~~includes~~ further comprising manufacturing the insulation material from particles of different insulation materials.

30. (Currently Amended) The method defined in claim 29 ~~includes~~ further comprising manufacturing the insulation material from combustible insulation materials and incombustible insulation materials.

31. (Original) A method of manufacturing an insulation material that includes coating an open celled foam of a combustible insulation material with a material that is fire resistant and contributes to the rigidity of the insulation material.

32. (Currently Amended) The method defined in claim 31 ~~includes~~ further comprising coating the open celled foam by impregnating the foam with the fire resistant material.

33. (Currently Amended) The method defined in claim 31 ~~or claim 32~~ wherein the insulation material is suitable for structural applications.

34. (Currently Amended) The method defined in ~~any one of claims~~ claim 31 ~~to 33~~ wherein the fire resistant material is sodium silicate or an intumescent material.

35. (Currently Amended) A product that includes the insulation material defined in ~~any one of claims 1 to 9~~.